

Tsu-Wei Chou

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108
papers

17,039
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53
h-index

112
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112
ext. papers

18,261
ext. citations

7
avg, IF

6.88
L-index

#	Paper	IF	Citations
108	Advances in the science and technology of carbon nanotubes and their composites: a review. <i>Composites Science and Technology</i> , 2001 , 61, 1899-1912	8.6	3903
107	Nanocomposites in context. <i>Composites Science and Technology</i> , 2005 , 65, 491-516	8.6	1273
106	A structural mechanics approach for the analysis of carbon nanotubes. <i>International Journal of Solids and Structures</i> , 2003 , 40, 2487-2499	3.1	1050
105	Sensors and actuators based on carbon nanotubes and their composites: A review. <i>Composites Science and Technology</i> , 2008 , 68, 1227-1249	8.6	750
104	Aligned multi-walled carbon nanotube-reinforced composites: processing and mechanical characterization. <i>Journal Physics D: Applied Physics</i> , 2002 , 35, L77-L80	3	519
103	Dominant role of tunneling resistance in the electrical conductivity of carbon nanotube-based composites. <i>Applied Physics Letters</i> , 2007 , 91, 223114	3.4	518
102	Processing-structure-multi-functional property relationship in carbon nanotube/epoxy composites. <i>Carbon</i> , 2006 , 44, 3022-3029	10.4	493
101	On the elastic properties of carbon nanotube-based composites: modelling and characterization. <i>Journal Physics D: Applied Physics</i> , 2003 , 36, 573-582	3	477
100	An assessment of the science and technology of carbon nanotube-based fibers and composites. <i>Composites Science and Technology</i> , 2010 , 70, 1-19	8.6	462
99	State of the art of carbon nanotube fibers: opportunities and challenges. <i>Advanced Materials</i> , 2012 , 24, 1805-33	24	403
98	Carbon Nanotube Fiber Based Stretchable Wire-Shaped Supercapacitors. <i>Advanced Energy Materials</i> , 2014 , 4, 1300759	21.8	271
97	Stretchable Wire-Shaped Asymmetric Supercapacitors Based on Pristine and MnO ₂ Coated Carbon Nanotube Fibers. <i>ACS Nano</i> , 2015 , 9, 6088-96	16.7	258
96	Fiber Inclination Model of Three-Dimensional Textile Structural Composites. <i>Journal of Composite Materials</i> , 1986 , 20, 472-484	2.7	254
95	Microstructural Design of Fiber Composites 1992 ,		248
94	Single-walled carbon nanotubes as ultrahigh frequency nanomechanical resonators. <i>Physical Review B</i> , 2003 , 68,	3.3	238
93	Graphene-Based Fibers: A Review. <i>Advanced Materials</i> , 2015 , 27, 5113-31	24	232
92	One-dimensional micromechanical analysis of woven fabric composites. <i>AIAA Journal</i> , 1983 , 21, 1714-1721		229

91	Elastic Behavior of Woven Hybrid Composites. <i>Journal of Composite Materials</i> , 1982 , 16, 2-19	2.7	228
90	Some recent advances in the fabrication and design of three-dimensional textile preforms: a review. <i>Composites Science and Technology</i> , 2000 , 60, 33-47	8.6	218
89	Vibrational behaviors of multiwalled-carbon-nanotube-based nanomechanical resonators. <i>Applied Physics Letters</i> , 2004 , 84, 121-123	3.4	212
88	Additive manufacturing of multi-directional preforms for composites: opportunities and challenges. <i>Materials Today</i> , 2015 , 18, 503-512	21.8	196
87	Real-time in situ sensing of damage evolution in advanced fiber composites using carbon nanotube networks. <i>Nanotechnology</i> , 2008 , 19, 215713	3.4	194
86	Sensing of Damage Mechanisms in Fiber-Reinforced Composites under Cyclic Loading using Carbon Nanotubes. <i>Advanced Functional Materials</i> , 2009 , 19, 123-130	15.6	189
85	Mass detection using carbon nanotube-based nanomechanical resonators. <i>Applied Physics Letters</i> , 2004 , 84, 5246-5248	3.4	177
84	Effect of nanotube waviness on the electrical conductivity of carbon nanotube-based composites. <i>Composites Science and Technology</i> , 2008 , 68, 1445-1452	8.6	171
83	Modeling of damage sensing in fiber composites using carbon nanotube networks. <i>Composites Science and Technology</i> , 2008 , 68, 3373-3379	8.6	147
82	Highly Sensitive Wearable Textile-Based Humidity Sensor Made of High-Strength, Single-Walled Carbon Nanotube/Poly(vinyl alcohol) Filaments. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 4788-4797	9.5	141
81	Multiscale modeling of compressive behavior of carbon nanotube/polymer composites. <i>Composites Science and Technology</i> , 2006 , 66, 2409-2414	8.6	141
80	Modeling of elastic buckling of carbon nanotubes by molecular structural mechanics approach. <i>Mechanics of Materials</i> , 2004 , 36, 1047-1055	3.3	138
79	Functionalized Single-Walled Carbon Nanotubes for Carbon Fiber/Epoxy Composites. <i>Journal of Physical Chemistry C</i> , 2007 , 111, 17865-17871	3.8	126
78	Nonlinear Behavior of Woven Fabric Composites. <i>Journal of Composite Materials</i> , 1983 , 17, 399-413	2.7	122
77	In-Plane Thermal Expansion and Thermal Bending Coefficients of Fabric Composites. <i>Journal of Composite Materials</i> , 1983 , 17, 92-104	2.7	117
76	In situ sensing of impact damage in epoxy/glass fiber composites using percolating carbon nanotube networks. <i>Carbon</i> , 2011 , 49, 3382-3385	10.4	116
75	Processing and electrical properties of carbon nanotube/vinyl ester nanocomposites. <i>Composites Science and Technology</i> , 2009 , 69, 801-804	8.6	107
74	Strain and pressure sensing using single-walled carbon nanotubes. <i>Nanotechnology</i> , 2004 , 15, 1493-1496	3.4	106

73	The effective interfacial shear strength of carbon nanotube fibers in an epoxy matrix characterized by a microdroplet test. <i>Carbon</i> , 2012 , 50, 1271-1279	10.4	104
72	Coupled carbon nanotube network and acoustic emission monitoring for sensing of damage development in composites. <i>Carbon</i> , 2009 , 47, 1381-1388	10.4	103
71	Carbon Nanotube Fiber Based Stretchable Conductor. <i>Advanced Functional Materials</i> , 2013 , 23, 789-793	15.6	88
70	Carbon nanotube fibers for advanced composites. <i>Materials Today</i> , 2012 , 15, 302-310	21.8	87
69	Elastic properties of single-walled carbon nanotubes in transverse directions. <i>Physical Review B</i> , 2004 , 69,	3.3	87
68	Experimental Confirmation of the Theory of Elastic Moduli of Fabric Composites. <i>Journal of Composite Materials</i> , 1985 , 19, 443-458	2.7	87
67	Damage sensing of adhesively-bonded hybrid composite/steel joints using carbon nanotubes. <i>Composites Science and Technology</i> , 2011 , 71, 1183-1189	8.6	85
66	Modeling of 3-D Angle-Interlock Textile Structural Composites. <i>Journal of Composite Materials</i> , 1989 , 23, 890-911	2.7	85
65	Carbon nanotube-based health monitoring of mechanically fastened composite joints. <i>Composites Science and Technology</i> , 2008 , 68, 2557-2561	8.6	77
64	Continuum percolation of nanocomposites with fillers of arbitrary shapes. <i>Applied Physics Letters</i> , 2007 , 90, 174108	3.4	71
63	A three-dimensional model of electrical percolation thresholds in carbon nanotube-based composites. <i>Applied Physics Letters</i> , 2010 , 96, 223106	3.4	70
62	The properties of dry-spun carbon nanotube fibers and their interfacial shear strength in an epoxy composite. <i>Carbon</i> , 2011 , 49, 1752-1757	10.4	66
61	Processing and characterization of multi-scale hybrid composites reinforced with nanoscale carbon reinforcements and carbon fibers. <i>Composites Part A: Applied Science and Manufacturing</i> , 2011 , 42, 337-344	8.4	65
60	Highly conductive polymer composites based on controlled agglomeration of carbon nanotubes. <i>Carbon</i> , 2010 , 48, 2649-2651	10.4	62
59	A comparative study of damage sensing in fiber composites using uniformly and non-uniformly dispersed carbon nanotubes. <i>Carbon</i> , 2010 , 48, 3788-3794	10.4	61
58	Fabrication and characterization of reaction bonded silicon carbide/carbon nanotube composites. <i>Journal Physics D: Applied Physics</i> , 2005 , 38, 3962-3965	3	57
57	Damage monitoring in fiber-reinforced composites under fatigue loading using carbon nanotube networks. <i>Philosophical Magazine</i> , 2010 , 90, 4085-4099	1.6	55
56	Flexible ultra-thin Fe ₃ O ₄ /MnO ₂ core-shell decorated CNT composite with enhanced electromagnetic wave absorption performance. <i>Composites Part B: Engineering</i> , 2018 , 144, 111-117	10	54

55	Axial and radial thermal expansions of single-walled carbon nanotubes. <i>Physical Review B</i> , 2005 , 71,	3.3	53
54	Nanotube buckling in aligned multi-wall carbon nanotube composites. <i>Carbon</i> , 2004 , 42, 3015-3018	10.4	51
53	Process-microstructure relationships of 2-step and 4-step braided composites. <i>Composites Science and Technology</i> , 1996 , 56, 235-251	8.6	51
52	Effect of Fiber Waviness on the Nonlinear Elastic Behavior of Flexible Composites. <i>Journal of Composite Materials</i> , 1988 , 22, 1004-1025	2.7	51
51	Sensing of damage and healing in three-dimensional braided composites with vascular channels. <i>Composites Science and Technology</i> , 2012 , 72, 1618-1626	8.6	43
50	Analytical Characterization of Two-Step Braided Composites. <i>Journal of Composite Materials</i> , 1991 , 25, 1599-1618	2.7	42
49	Failure of carbon nanotube/polymer composites and the effect of nanotube waviness. <i>Composites Part A: Applied Science and Manufacturing</i> , 2009 , 40, 1580-1586	8.4	39
48	Analysis of the entanglements in carbon nanotube fibers using a self-folded nanotube model. <i>Journal of the Mechanics and Physics of Solids</i> , 2011 , 59, 511-524	5	39
47	Electromechanical response and failure behaviour of aerogel-spun carbon nanotube fibres under tensile loading. <i>Journal of Materials Chemistry</i> , 2012 , 22, 6792		37
46	Microstructural evolution of carbon nanotube fibers: deformation and strength mechanism. <i>Nanoscale</i> , 2013 , 5, 2002-8	7.7	37
45	Damage Development and Moduli Reductions in Nicalon/Calcium Aluminosilicate Composites under Static Fatigue and Cyclic Fatigue. <i>Journal of the American Ceramic Society</i> , 1993 , 76, 1720-1728	3.8	37
44	A direct electrifying algorithm for backbone identification. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2007 , 40, 14679-14686	2	36
43	High-Strength Single-Walled Carbon Nanotube/Permalloy Nanoparticle/Poly(vinyl alcohol) Multifunctional Nanocomposite Fiber. <i>ACS Nano</i> , 2015 , 9, 11414-21	16.7	34
42	Characterization of carbon nanotube fiber compressive properties using tensile recoil measurement. <i>ACS Nano</i> , 2012 , 6, 4288-97	16.7	34
41	Elastic wave velocities in single-walled carbon nanotubes. <i>Physical Review B</i> , 2006 , 73,	3.3	34
40	Mode I Delamination of a Three-Dimensional Fabric Composite. <i>Journal of Composite Materials</i> , 1990 , 24, 497-518	2.7	33
39	Radial deformation and its related energy variations of single-walled carbon nanotubes. <i>Physical Review B</i> , 2011 , 83,	3.3	32
38	Remotely and Sequentially Controlled Actuation of Electroactivated Carbon Nanotube/Shape Memory Polymer Composites. <i>Advanced Materials Technologies</i> , 2019 , 4, 1900600	6.8	30

37	Theoretical studies on the charge-induced failure of single-walled carbon nanotubes. <i>Carbon</i> , 2007 , 45, 922-930	10.4	30
36	Structure-performance maps of polymeric, metal, and ceramic matrix composites. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1986 , 17, 1547-1559		30
35	Atomistic Modeling of Carbon Nanotube-based Mechanical Sensors. <i>Journal of Intelligent Material Systems and Structures</i> , 2006 , 17, 247-254	2.3	29
34	Mechanical and electrical response of carbon nanotube-based fabric composites to Hopkinson bar loading. <i>Composites Science and Technology</i> , 2011 , 71, 616-621	8.6	27
33	Charge-induced strains in single-walled carbon nanotubes. <i>Nanotechnology</i> , 2006 , 17, 4624-8	3.4	27
32	Structural supercapacitor composites: A review. <i>Composites Science and Technology</i> , 2021 , 204, 108636	8.6	26
31	Modeling of heat capacities of multi-walled carbon nanotubes by molecular structural mechanics. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2005 , 409, 140-144	5.3	25
30	Electrostatic charge distribution on single-walled carbon nanotubes. <i>Applied Physics Letters</i> , 2006 , 89, 063103	3.4	24
29	Quantized molecular structural mechanics modeling for studying the specific heat of single-walled carbon nanotubes. <i>Physical Review B</i> , 2005 , 71,	3.3	23
28	Formicary-like carbon nanotube/copper hybrid nanostructures for carbon fiber-reinforced composites by electrophoretic deposition. <i>Journal of Materials Science</i> , 2011 , 46, 2359-2364	4.3	22
27	Stress relaxation in carbon nanotube-based fibers for load-bearing applications. <i>Carbon</i> , 2013 , 52, 347-355.	5.4	21
26	The use of Taguchi optimization in determining optimum electrophoretic conditions for the deposition of carbon nanofiber on carbon fibers for use in carbon/epoxy composites. <i>Carbon</i> , 2012 , 50, 2853-2859	10.4	21
25	Damage mode characterization of mechanically fastened composite joints using carbon nanotube networks. <i>Composites Part A: Applied Science and Manufacturing</i> , 2011 , 42, 2003-2009	8.4	19
24	Modeling of carbon nanotube clamping in tensile tests. <i>Composites Science and Technology</i> , 2005 , 65, 2407-2415	8.6	19
23	Elastic Response and Effect of Transverse Cracking in Woven Fabric Brittle Matrix Composites. <i>Journal of the American Ceramic Society</i> , 1995 , 78, 783-792	3.8	19
22	Synthesis and failure behavior of super-aligned carbon nanotube film wrapped graphene fibers. <i>Carbon</i> , 2014 , 72, 250-256	10.4	18
21	Carbon nanotube film based multifunctional composite materials: an overview. <i>Functional Composites and Structures</i> , 2020 , 2, 022002	3.5	17
20	Microstructural Design of Advanced Multi-Step Three-Dimensional Braided Preforms. <i>Journal of Composite Materials</i> , 1994 , 28, 1180-1201	2.7	17

19	A durability study of carbon nanotube fiber based stretchable electronic devices under cyclic deformation. <i>Carbon</i> , 2015 , 94, 352-361	10.4	16
18	Wet-spinning assembly and in situ electrodeposition of carbon nanotube-based composite fibers for high energy density wire-shaped asymmetric supercapacitor. <i>Journal of Colloid and Interface Science</i> , 2020 , 569, 298-306	9.3	15
17	Mechanical and electrochemical performance of hybrid laminated structural composites with carbon fiber/ solid electrolyte supercapacitor interleaves. <i>Composites Science and Technology</i> , 2020 , 196, 108234	8.6	15
16	Mechanical Behavior and Structural Evolution of Carbon Nanotube Films and Fibers Under Tension: A Coarse-Grained Molecular Dynamics Study. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2013 , 80,	2.7	13
15	PRECISE DETERMINATION OF BACKBONE STRUCTURE AND CONDUCTIVITY OF 3D PERCOLATION NETWORKS BY THE DIRECT ELECTRIFYING ALGORITHM. <i>International Journal of Modern Physics C</i> , 2009 , 20, 423-433	1.1	11
14	Mechanics of Textile Composites 2000 , 719-761		10
13	Microcracking and Elastic Moduli Reductions in Unidirectional Nicalon-CAS Composite Under Cyclic Fatigue Loading. <i>Ceramic Engineering and Science Proceedings</i> , 881-888	0.1	10
12	A continuum mechanics model of multi-buckling in graphene substrate systems with randomly distributed debonding. <i>International Journal of Solids and Structures</i> , 2016 , 97-98, 510-519	3.1	8
11	Braided structures 1999 , 217-240		7
10	Electromechanical behavior of carbon nanotube fibers under transverse compression. <i>Journal Physics D: Applied Physics</i> , 2017 , 50, 085303	3	5
9	Modeling of Carbon Nanotubes and Their Composites 2006 , 55-65		5
8	Carbon nanotube fibers spun from a sizing material. <i>Applied Physics Letters</i> , 2014 , 105, 261903	3.4	3
7	Multifunctional composites with self-sensing capabilities: carbon nanotube-based networks 2007 ,		2
6	Carbon-Nanotube-Based Composites and Damage Sensing 2010 , 159-281		2
5	Multifunctional continuous fibers based on aligned carbon nanotubes. <i>Journal Physics D: Applied Physics</i> , 2016 , 49, 461002	3	1
4	Simplified Greens functions for mode I and II cracks. <i>International Journal of Fracture</i> , 1989 , 39, 301-321	2.3	1
3	1.2 Carbon Nanotube Based Fibers 2018 , 13-40		
2	Numerical Analysis for Design of Composite Specimens for Through-the-Thickness Tensile Measurements. <i>Journal of Composite Materials</i> , 1994 , 28, 1032-1056	2.7	

- 1 Performance Optimization of Woven Fabric Composites for Printed Circuit Boards. *Materials Research Society Symposia Proceedings*, **1986**, 72, 163